

Amendments To The Claims

Please cancel Claims 9-15 without prejudice. The following list of the claims replaces all prior versions and lists of the claims in this application.

1. (Currently amended) A seal ring structure comprising:
a substrate;
a plurality of layers of metal lines formed overlying said substrate; and
a plurality of metal vias through intermetal dielectric layers between said layers of metal lines;
wherein said metal vias interconnect said metal lines;
wherein said plurality of layers of interconnected metal lines forms a continuous seal ring around a die, said seal ring having a plurality of edge portions and a plurality of corner portions, each said edge portion extending between a respective pair of said corner portions, each said corner portion of said seal ring having approximately straight first and second edges on inner and outer sides thereof that are approximately parallel to each other, and that are sloped at an angle to each of two said edge portions located adjacent that corner portion, so each said corner portion is free of a sharp corner; and
wherein a first width of said metal lines ~~at a~~ between said first and second edges of each ~~said corner of said die portion~~ is wider than a second width of said metal lines at ~~edges of said die~~ each ~~said edge portion~~.

2. (Currently amended) The seal ring structure according to Claim 1, wherein portions of said metal lines that serve as said edge portions are parallel to said edges of said die and wherein said metal lines are sloped at said corner of said die so that said metal lines do not have a sharp corner.

3. (Currently amended) The seal ring structure according to Claim 1, wherein only a portion of each said corner portion has a width wider than said second width.

4. (Currently amended) The seal ring structure according to Claim 1, wherein the whole of each said corner portion has a width wider than said second width.

5. (Currently amended) The seal ring structure according to Claim 1, wherein one or more slots or holes are formed in said first width of said metal lines at each said corner.

6. (Previously presented) The seal ring structure according to Claim 1, wherein said first width is about 1.5 times said second width or greater.

7. (Currently amended) The seal ring structure according to Claim 1, further comprising semiconductor device structures within said die wherein a first distance between said semiconductor device structures and a and each said corner portion of said seal ring is smaller than a second distance between said semiconductor device structures and an and each said edge portion of said seal ring.

8. (Previously presented) The seal ring structure according to Claim 7, wherein all active semiconductor device structures in said die are located within said seal ring and wherein devices involved in temperature testing are located outside of said seal ring.

Claims 9-15 (Canceled).

16. (Currently amended) A semiconductor device comprising:
semiconductor device structures formed in and on a substrate; and
a seal ring enclosing said semiconductor device structures forming a single die, said seal ring having a plurality of edge portions and a plurality of corner portions, each said edge portion extending between a respective pair of said corner portions;
wherein a first distance between said semiconductor device structures and a and each said corner portion of said seal ring is smaller than a second distance between said semiconductor device structures and an and each said edge portion of said seal ring; and
wherein each said corner portion of said seal ring has approximately straight first and
second edges on inner and outer sides thereof that are approximately parallel to each other, and
that are sloped at an angle to each of two said edge portions located adjacent that corner portion,
so each said corner portion is free of a sharp corner.

17. (Previously presented) The device according to Claim 16, wherein said semiconductor device structures include gate electrodes, source and drain regions, and a plurality of layers of interconnected conductive lines.

18. (Previously presented) The device according to Claim 16, wherein said semiconductor device structures include all active devices of said semiconductor device except for devices used for temperature testing.

19. (Previously presented) The device according to Claim 16, wherein said seal ring comprises:

a plurality of layers of metal lines formed on said substrate; and
a plurality of metal vias through intermetal dielectric layers between said layers of metal lines;

wherein said metal vias interconnect said metal lines; and
wherein said plurality of layers of interconnected metal lines forms a continuous seal ring
around said die.

20. (Currently amended) The device according to Claim 19, wherein portions of said
interconnected metal lines that serve as said edge portions are parallel to said edges of said die
~~and wherein said interconnected metal lines are sloped at said corner of said die so that said~~
~~interconnected metal lines do not have a sharp corner.~~

21. (Currently amended) The device according to Claim 16, wherein each said corner
portion of said seal ring has a first width and between said first and second edges thereof,
wherein each said edge portion of said seal ring has a second width, and wherein said first width
is wider than said second width.

22. (Previously presented) The device according to Claim 21, wherein said first width is
about 1.5 times said second width or greater.

23. (Currently amended) The device according to Claim 21, wherein only a portion of
each said corner portion of said seal ring has a width wider than said second width.

24. (Currently amended) The device according to Claim 21, wherein the whole of each
said corner portion of said seal ring has a width wider than said second width.

25. (Currently amended) The device according to Claim 16, wherein one or more slots
or holes are formed in each said corner portion of said seal ring.